

REMARKS

In accordance with the foregoing, claims 1-9, 45-52 and 67 are amended. No new matter is being presented, and approval and entry are respectfully requested.

Claims 1-22 and 45-67 are pending and under consideration.

Claim Amendments

Claims 1-9, 45-52 and 67 are amended. Independent claims 1, 45, and 67 are amended to clarify that a method, a computer-readable medium and an apparatus include, using claim 1, as an example, "analyzing a search request sentence provided by said user using syntactic parsing; analyzing an intention of the query based on the analyzed search request sentence, wherein the analyzing comprises: determining whether said search request sentence includes an interrogative pronoun, and extracting, as a topic of query, a top level component of syntactic hierarchy of said search request sentence in a case said search request sentence does not include an interrogative pronoun or extracting a component qualified by an interrogative pronoun in a case said search request sentence includes the interrogative pronoun; generating search criteria based on said topic of query extracted in said analyzing the intention of query; searching said database using said generated search criteria and retrieving, as search results, information that are intended for said topic of query; determining an output format of search results based on said topic of the query without further input by the user; and outputting said search results that are selected items to be presented to the user."

Dependent claims 2-9 and 46-52 are amended accordingly. No new matter is being presented, and approval and entry are respectfully requested.

Traverse Of Rejections

Claims 1-22 and 45-67 are rejected under 35 U.S.C. §103(a) as being unpatentable over Bessho et al. in view of combinations of Miyauchi (U.S.P. 6,574,622), Ferrel et al. (U.S.P. 5,907,837), Rose (U.S.P. 5,752,244), Ortega (U.S.P. 6,401,084 B1), Talib et al. (U.S. Pub. 2001/0044758 A1), Henkin et al. (U.S. Pub. 2002/0107735 A1) and Schultz (U.S.P. 5,640,553).

The rejections are traversed.

Features of Present Invention Not Taught By Cited Art

As set forth in MPEP §2143.03 "To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art."

Independent claims 1, 45, and 67, all as amended herein, recite a method, a computer-readable medium and an apparatus include, using claim 1, as an example, "analyzing a search

request sentence provided by said user using syntactic parsing; analyzing an intention of the query based on the analyzed search request sentence, wherein the analyzing comprises: determining whether said search request sentence includes an interrogative pronoun, and extracting, as a topic of query, a top level component of syntactic hierarchy of said search request sentence in a case said search request sentence does not include an interrogative pronoun or extracting a component qualified by an interrogative pronoun in a case said search request sentence includes the interrogative pronoun; generating search criteria based on said topic of query extracted in said analyzing the intention of query; searching said database using said generated search criteria and retrieving, as search results, information that are intended for said topic of query; determining an output format of search results based on said topic of the query without further input by the user; and outputting said search results that are selected items to be presented to the user."

Applicants respectfully submit that features recited by claims 1-22 and 45-67 are not taught by the cited art, alone or in combination.

Bessho, alone or in combination, does not teach, for example, an extracting process "extracting, as a topic of query, a top level component of syntactic hierarchy of said search request sentence in a case said search request sentence does not include an interrogative pronoun or extracting a component qualified by an interrogative pronoun in a case said search request sentence includes the interrogative pronoun."

Rather, Bessho merely teaches (see, for example, col. 8, lines 36-41) conduct of a first analysis of a natural language question sentence by syntactic parsing and semantic analyzing, and comes up with a syntactic tree based on the result of said analysis. Bessho further teaches that during the analysis of the sentence that based on a predetermined rule, analysis is continued as long as a target node has a verb phrase as its headed structure, or a target node is a pronoun whose antecedent is placed as another node in the syntactic tree. If a target node is another part of speech, the analysis will be stopped in order to reduce the workload of the analysis process.

Thus, Bessho merely teaches that a search keyword will be extracted with reference to the predetermined extraction rule table from the semantic structure of the question sentence. That is, Bessho, alone or in combination, does not teach, an extracting process "extracting, as a topic of query, a top level component of syntactic hierarchy of said search request sentence," as recited in each of the present applications independent claims.

Example of Advantages According to Aspect of the Present Invention

As an example of advantages of an aspect of the present invention, for the convenience

of the Examiner to aid in distinguish the present invention from the cited art, the following example is provided.

In an example case of the following two sentences being provided:

Question Sentence 1:

"I want to know about the Fuji Company which sells various keyboards."

Question Sentence 2:

"I want to know about Fuji Company's various keyboards."

According to an aspect of the present invention, the element of "Fuji Company" is extracted as a topic from question sentence 1, and the following example search condition is generated.:

SELECT Corporate information

WHERE company name = Fuji Company and
product class = keyboard

Likewise, the element of "keyboard(s)" is extracted as a topic from question sentence 2 and the following search condition is generated:

SELECT Product information

WHERE company name = Fuji Company and
product class = keyboard

Therefore, according to an aspect of the present invention, the output items of search in question sentence 1 are:

Corporate information (a company name, a location, a representative),
product class, and

The output items of the search results in question sentence 2 are:

Product information (a product name, a part number, a price,) company
name, and

That is, according to an aspect of the present invention, when a search process is conducted to a database group which includes two or more databases for different categories of information, including corporate information, product information, customer information, etc, the present invention can provide completely different search results based on the different topics which reflect the user's intention.

Bessho, alone or in combination, cannot output different search results which reflect a user's intuition or what kind of information is required.

Rather, as taught by Bessho, in the case of question sentence 1, the information which includes the two elements, "Fuji Company" and "keyboard (s)", will be extracted from the semantic structure of the sentence.

Likewise, Bessho teaches that in the case of question sentence 2, the information including these two elements will also be extracted. Because the semantic relationship between the two elements "Fuji Company" and "keyboard(s)" is the same in each question sentence, one of ordinary skill in the art understands that such a sequence will inevitably lead to the one semantic concept "Fuji Company sells various keyboards."

That is, Bessho teaches a method in which search results in either case will be the same, because one semantic concept leads to one category.

Examiner's Interpretation of Miyauchi is Not Correct

The Examiner contends that Miyauchi teaches:

determining whether a search request includes an interrogative . . . and extracting a component qualified by the interrogative in a case said search request includes an interrogative.

That is, the Examiner contends that Miyauchi teaches determining whether an interrogative pronoun prone is contained in a question sentence and can decide the topic of the question sentence based on said interrogative pronoun.

Applicants submit, however, that Fig. 6 cited by the Examiner in Miyauchi merely illustrates an entry screen. Further, the wording on the screen that the Examiner contends is an "interrogative sentence" on the screen is merely a screen heading. This screen heading taught by Miyauchi merely shows a user input area for primary query (actually search keywords).

Further, Miyauchi teaches that words to be input as a primary query must be general nouns except interrogatives. In addition, Miyauchi saves search results conducted using two or more keywords input as primary query, and teaches showing the user every relationship between keywords in the results in order to have the user select one relationship which the user deems to most appropriately represent their intention.

According to aspects of the present invention, such a query-and-response is conducted without recurring such a user's operation.

Summary

Since features recited by independent claims 1, 45, and 67 (and respective dependent claims) are not taught by the cited art, alone or in combination, and *prima facie* obviousness is not established, the rejection should be withdrawn and claims 1-22 and 45-67 allowed.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

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Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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